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APRIL, 1906

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THE  
AMERICAN MUSEUM  
JOURNAL



LOCAL-BIRDS NUMBER

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Published quarterly by  
THE AMERICAN MUSEUM OF NATURAL HISTORY

# American Museum of Natural History

Seventy-seventh Street and Central Park West, New York City

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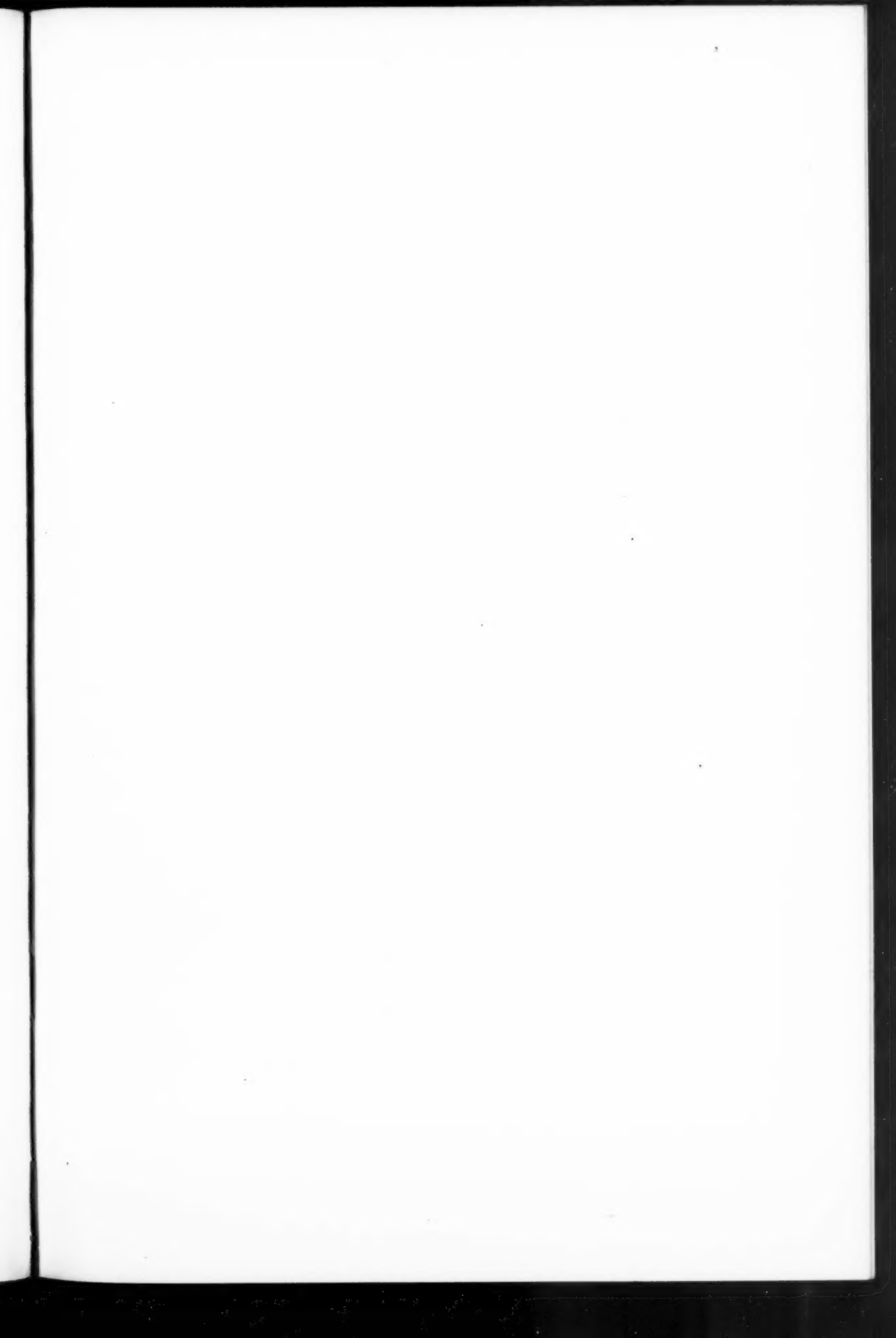
THE AMERICAN MUSEUM OF NATURAL HISTORY was established in 1869 to promote the Natural Sciences and to diffuse a general knowledge of them among the people, and it is in cordial coöperation with all similar institutions throughout the world. The Museum authorities are dependent upon private subscriptions and the dues from members for procuring needed additions to the collections and for carrying on explorations in America and other parts of the world.

The membership fees are,

Annual Members.....	\$ 10	Fellows.....	\$ 500
Life Members .....	100	Patrons.....	1000

All money received from membership fees is used for increasing the collections, and for developing the educational work of the Museum.

The Museum is open free to the public on Wednesdays, Thursdays, Fridays, Saturdays, and Sundays. Admittance is free to Members every day.

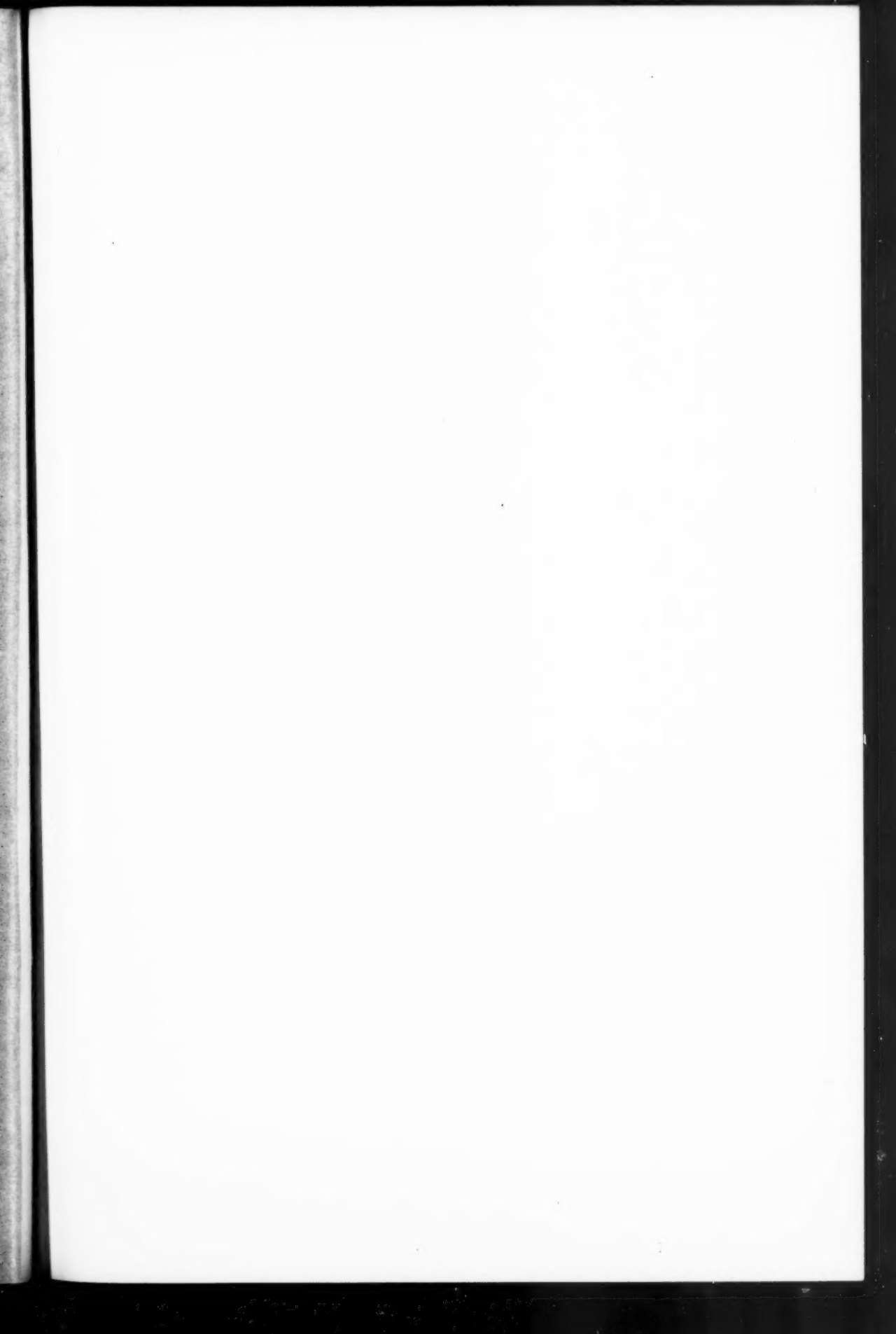






THE JESUS LOVING CUP  
Anthropology-Forestry Panel

THE JESUP LOVING CUP  
Anthropology-Forestry Panel





LOVING CUP  
PRESENTED TO PRESIDENT JEBB  
BY THE TRUSTEES  
Alaska Gold  
Weight 112 in Dec. 1904

LOVING CUP  
PRESENTED TO PRESIDENT JESUP  
BY THE TRUSTEES

Alaska Gold  
Height, 11½ inches. Weight, 2064 dwt.



# The American Museum Journal

VOL. VI.

APRIL, 1906.

No. 2

## THE TWENTY-FIFTH ANNIVERSARY OF THE PRESIDENCY OF MR. JESUP.



THE thirty-eighth annual meeting of the Board of Trustees of the Museum was held February 12, at the residence of Professor Osborn. The annual dinner followed the meeting, and at the close of the dinner after short addresses by Professor Osborn and Mr. J. Pierpont Morgan, Mr. Joseph H. Choate arose and on behalf of the Board of Trustees presented to President Jesup a gold loving cup bearing the following inscription:

1881

1906

FROM THE TRUSTEES  
OF THE  
AMERICAN MUSEUM OF NATURAL HISTORY  
TO  
MORRIS K. JESUP  
ON THE  
TWENTY-FIFTH ANNIVERSARY  
OF HIS  
PRESIDENCY OF THE MUSEUM  
IN RECOGNITION OF HIS MOST ABLE  
GENEROUS AND SUCCESSFUL  
ADMINISTRATION  
FEBRUARY 12th 1906

In his informal presentation speech, Mr. Choate referred to the critical period in the history of the Museum a quarter of a century ago when Mr. Jesup assumed the presidency, to the uninterrupted devotion which Mr. Jesup has shown to the highest interests of the Museum, to his generous gifts and to the rapid development of the Museum, which from a comparatively small beginning is now among the most important natural history museums of the world. Mr. Choate's address concluded with the presentation of the cup.

The cup is the work of Tiffany & Co., from designs indicating the principal branches of science which have been developed in the Museum and is commemorative particularly of the work in which Mr. Jesup has chiefly interested himself. The precious metal selected for the cup is gold from Alaska in reference to the President's interest in the North Pacific explorations. Around the base is a beautiful ornamental design taken from the work of the Amur River tribes, as shown in Volume VII of the Jesup North Pacific Reports. At the summits of the handles the gold relief work of pine leaves and pine cones and oak leaves and acorns is in reference to the collection of North American woods and forestry presented to the Museum by President Jesup.

The center of the cup is divided into four panels, the first of which contains the inscription above quoted. The second panel bears at the top the words GEOLOGY, GEOGRAPHY, beneath which is a design representing the cone of Mt. Pelé. The third panel bears at the top the words ANTHROPOLOGY, FORESTRY, and the design represents a Siberian native riding a reindeer with the words "North Pacific Expedition" beneath. The fourth panel is inscribed to ZOOLOGY, PALÆONTOLOGY, with a design beneath composed of two of the fin-back Permian lizards, having under it the inscription "Cope Collection of Dinosaurs," in reference to the collection presented by Mr. Jesup.

Among the many changes marking the development of the Museum during the quarter of a century since Mr. Jesup was elected to the presidency the following may be mentioned as strikingly indicative of the feeling entertained by the President and heartily endorsed by the Board of Trustees that the museum which does not grow must cease to exist.

In 1881 there were only 54,500 sq. feet of floor space; now there are 570,158.

Then the building represented a cost of approximately half a million; now of approximately four millions of dollars.

In 1881 the city appropriated \$10,000 for maintenance. It now appropriates \$170,000.

Then there were twelve officers and employes; now there are one hundred and eighty-five.



The membership list has increased from approximately 800 to 2,000; the permanent endowment, from nothing to \$1,013,000.

Before 1881 there were no publications, whereas the appropriation for publications alone for the current year is more than the entire appropriation of that year.

Before 1881 there were no public lectures. During the past year more than three hundred were delivered.

The meeting of the board was memorable, moreover, as bringing together for the first time in many years three of the original founders of the Museum, Messrs. Joseph H. Choate, J. Pierpont Morgan and Morris K. Jesup.

HENRY FAIRFIELD OSBORN.

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#### JOHN H. WINSER.



AFTER a brief illness with pneumonia complicated with heart trouble, Mr. John H. Winsor, for many years secretary and assistant treasurer of the Museum, died Friday, January 12. At the annual meeting of the Board of Trustees the following resolutions were adopted:

"RESOLVED, That the Trustees desire to record their sense of loss in the death of MR. JOHN H. WINSER, for so many years the faithful Secretary and Assistant Treasurer of the Museum.

"Mr. Winsor was appointed to his office in 1892, and for fourteen years served the Board of Trustees and the officers of the staff of the Museum with the greatest fidelity. He was invariably accurate in all his accounts and records, absolutely trustworthy in all matters of administration, devoted to the best interests of the Museum, giving its interests his very constant thought and attention, and extremely courteous and kindly in his manner. When acting under the direction of the President or other members of the Board he could always be depended upon faithfully to represent their wishes and instructions. During all the long years of his service he never failed to do his duty to the best of his ability. His genial and kindly presence will be greatly missed at the Museum.

"Resolved, That a copy of this resolution be sent to the surviving members of his family with an expression of warm sympathy."

THE SCIENTIFIC PUBLICATIONS OF THE JESUP NORTH  
PACIFIC EXPEDITION.

URING the year 1905 several important parts of the scientific results of the Jesup North Pacific Expedition were published under the editorship of Professor Franz Boas, who has had the direction of all the work.

Volume III, Part 3. *Kwakiutl Texts*. By Franz Boas and George Hunt.

This number closes the volume containing the Kwakiutl texts recorded by Mr. George Hunt and revised and edited by Professor Boas. The volume is almost entirely devoted to traditions relating to the ceremonies and the families of this important group of Indians. These traditions, which are numerous, are remarkably uniform, and they explain the large collection of ceremonial objects collected for the Museum. The traditions resemble those of the coast tribes living farther north, and they account for family and tribal privileges. The style of the text is diffuse, but has been preserved because the stories contain many data relating to the every-day life of the tribe.

Volume V, Part 1. *Contributions to the Ethnology of the Haida*. By John R. Swanton.

Dr. Swanton's work among the Haida of the Queen Charlotte Islands was undertaken in co-operation with the United States Bureau of Ethnology with the understanding that the ethnological results were to be published by the Jesup North Pacific Expedition. The deities of the Haida are divided into two groups in the same way as the tribe themselves; those of the Raven and the Eagle. Regarding the tribal clans the interesting conclusion is reached that according to the ideas of the Haida the Raven clan is indigenous to the islands, while the Eagle clan may possibly be descendants of emigrants from the main land.

The principal crests of the families, which represent certain prerogatives, are for the Raven clan, the killer whale and grisly bear, for the Eagle clan, the eagle and the beaver. Some of the totem poles which are such a familiar sight to tourists in

the region bear the crest figures of the house owner and his wife, while others represent incidents in myths. Grave posts, canoes and household utensils bear similar representations, and crests are used by the people as designs in tattooing their bodies. The secret societies of the tribes are owned by various families and the more important were introduced from the south. The volume contains a number of interesting maps compiled by Dr. Charles F. Newcombe on which the native names of places and the locations of towns have been recorded.

Volume VI, Part 1. *The Koryak*. By Waldemar Jochelson.

The subjects treated in this volume are the religion and the mythology of one of the most important of the tribes living in extreme eastern Siberia. The principal Koryak deity is Big-Raven, who is looked upon as the founder of the world and the creator of its inhabitants. He is appealed to through prayers, sacrifices and incantations. The Koryak have besides a vague conception of a supreme being who sent Big-Raven to the earth to establish order. This supreme being does not seem to interfere in detail with the affairs of man, but as long as he looks down upon the earth there is abundance and health, whereas disorder reigns as soon as he turns away.

Malevolent spirits are very numerous, and there are supernatural beings which are rulers of various parts of the country. The Koryak, therefore, make extensive use of charms representing supernatural beings for protection against spirits. Sacrifices both bloody and bloodless are offered to the supernatural beings. The most important of these sacrifices are of reindeer and dogs, and Mr. Jochelson describes in detail the peculiar custom of attaching the bodies of dogs to poles or to the trees which represent the village guardians. Shamanism too plays an important part in the life of the Koryak. Professional shamans who treat the sick are employed in the tribe in addition to the particular family shamans.

Among the Maritime Koryak elaborate festivals are held relating to whale hunts, while among the Reindeer Koryak the most important ceremonials pertain to the herd of reindeer. The burial customs of the people are complex and include cremation.

The mythology of the tribe is remarkably uniform and deals

for the most part with the marriages of the children of Big-Raven and of his struggles with supernatural beings. The book closes with a detailed comparison of the Koryak mythology with the other mythologies of Siberia and with those of the Eskimo and the North American Indians, from which the author concludes that the interchange of mythological elements between the Indians and the Koryak must be older than that between the Koryak and the Eskimo.

Volume VII, Part 1. *The Chukchee*. By Waldemar Bogoras.

This book shows the intimate acquaintance which the author obtained through continuous studies made in the Kolyma district from 1889 to 1898 and later investigations carried on for the Jesup North Pacific Expedition at Anadyr and along the coast of the Chukchee Peninsula, eastern Siberia. The volume for the most part is devoted to the material culture of the people and the author concludes that in earlier times the Chukchee lived on the coast and that the present residence in the interior and the domestication of the reindeer are comparatively recent events. At the present time too the Chukchee are divided into two sections, the Maritime and the Reindeer groups. The method of harnessing reindeer is peculiar to the Chukchee, who use the animal mainly for hauling sledges. The present method of dog harnessing in pairs is that used by other Siberian tribes, whereas formerly all the dogs were attached to one point of the sledge, as is the present custom among the Eskimo.

The Chukchee hunt the seal and other sea mammals in a manner essentially the same as that used by the Eskimo. The means employed for capturing land animals are a combination of those employed by the Eskimo and by the tribes of western Siberia. The Chukchee employ sinewback bows and composite bows similar to those found farther south. The iron work of the tribe is extensive and shows the influence of the Yakut and the Amur River tribes. Armor made of small pieces of iron linked together and arranged in horizontal rows was formerly used by the Chukchee. The neck was protected by a large wooden ring incased in hide.

Detailed descriptions are given of the tents, the clay lamps and household utensils, the food and the manufactures. The

women, particularly those of the Maritime Chukchee, are tattooed and the designs are believed to have a magical significance. Many of the ornaments worn by the people are considered efficacious as charms. The Chukchee, furthermore, are fond of games and sports. The maps which accompany the book give the ancient and the present distribution of the tribes of north-eastern Siberia. All the ethnological volumes of the expedition are profusely illustrated.

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#### THE NEW METEORITE.



ONE of the most important announcements made at the annual meeting of the Board of Trustees was that through the generosity of Mrs. William E. Dodge the Museum had come into the possession of the great Willamette meteorite. This mass of iron, the weight of which is estimated at about sixteen tons, was found in the Willamette valley, near Oregon City, Oregon, in 1902. It is the largest meteorite which has been found in the United States, and is probably the most interesting mass of meteoric iron which has ever been discovered. A full description of the mass, which is the most valuable single specimen yet acquired by the Museum, having cost \$20,600, is deferred to a later number of the JOURNAL.

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#### GUIDE TO THE COLLECTION OF LOCAL BIRDS.

WE present in this number of the JOURNAL the first installment of an article by Mr. Frank M. Chapman upon the collection representing the birds which are to be found within a radius of about 50 miles of New York City, taking the Museum as a center. The completing installment of the article will be published with the July JOURNAL, and the whole article will be issued together in separate form as No. 22 of the Museum series of Guide Leaflets. The collection referred to may be found in the Hall of Local Birds, No. 303 of the third, or gallery, floor of the Museum building.

## HINDOO SILVER WARE.



LARGE and valuable collection of silver work from India has been presented to the Museum by Mr. J. G. Phelps-Stokes. There are in all forty-one pieces representing the best types of native work.

The chief value of this collection to the Museum, however, is not in the technique of the objects, but with respect to their uses. Several types of the regalia of a dancing girl are represented. One pair of anklets bears a large number of bells with foot and toe pieces. There are also ear and neck ornaments in the form of crescents with similar bells attached. These dancers wear massive silver girdles with long circular clasps which are represented in the collection by a very handsome piece. There are two other pieces of particular interest, because they represent the conventional ornaments worn by girls before and after puberty. The one worn before puberty contains a girdle from the middle of which hangs a heart-shaped ornament, inlaid with bits of turquoise, while above extending upward and attached to the necklace is a broad band similar to the girdle. At the age of puberty this is discarded and a girdle of similar form, but with circular appendage takes its place, which is represented in the collection by a very handsome specimen consisting of a girdle with a double chain extending up over the shoulders around the neck and down the back to the girdle behind. These pieces come from the Central Provinces of India.

There are several objects of religious interest, two of which are shown in the illustration. One is a small shrine containing an image of the Buddha, wrapped in sacred cloth. Such a shrine is usually worn by priests, suspended from a neck chain or string of prayer beads; the other is an elaborate silver prayer wheel of Thibetan type and is probably one of the most valuable specimens in the whole series, since such objects cannot readily be secured, owing to their sacred character. There are several other religious objects, such as anklets worn by the priests, with a number of bangles attached indicating the rank of the wearer, and small vessels for holding and sprinkling sacred water over the worshippers. This collection is particularly valuable to the Museum for comparative study, because the anklets and foot





SHRINE OF BUDDHA

Hindoo Silver

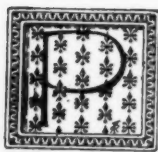
THIBETAN PRAYER WHEEL

ornaments of the Hindoo dancing girls are distributed westward from oriental countries into North Africa and even into Europe. It is also probable that the elaborate leg-rings and other ornaments of the Central and South African natives are in some way connected with those of India. Silver work found its way also into the regions occupied by the uncivilized peoples of Siberia, specimens of which are well represented in the collections of the Jesup North Pacific Expedition.

C. W.

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#### THE JOHN COLLINS WARREN COLLECTION.



PRELIMINARY announcement may be made of a very important acquisition which has come to the Museum and especially to the Department of Vertebrate Palæontology through the generosity of Mr. J. Pierpont Morgan. It is that of the John Collins Warren Collection which for many years has been behind closed doors in the Warren Museum of Natural History in Boston. The collection is particularly valuable on account of the skeleton of the famous "Warren Mastodon" which it contains. This was dug out of a swamp near Newburg, N. Y., in the extremely dry summer of 1845. It was put together and exhibited about the country until 1847, when it was purchased by Professor Warren, who was then president of the Boston Society of Natural History, and who was one of the leading naturalists of his day.

The skeleton was practically complete when found, the only parts missing being a few of the vertebræ of the tail, and a few bones of the tips of the toes. It is in equally perfect condition to-day except the tusks, which were injured when the animal was taken out. Fortunately the extremities and portions of the bases of the tusks are still preserved. What is most striking in the skeleton, as Professor Thomas Dwight, grandson of Professor Warren, observes in a recent article, "is not only its great height, some twelve feet, but its great breadth." Besides this magnificent specimen, which is the most perfect and the best ever found, the Warren Collection includes the fine skull of another mastodon, known as the "Shawangunk Head," parts of a third



specimen known as the "Baltimore Mastodon," and series of upper and lower teeth which together with the above form the principal subject of Professor Warren's great memoir published in quarto form in Boston in 1855.

The collection also includes the backbone and portions of the skull of the whale-like animal *Zeuglodon* formerly known as *Hydrarchus*. Another important feature of the collection is a series of Connecticut valley footprints of Dinosaurs, many of the specimens being of rare perfection. The skeleton of the *Ornithorhynchus* in the collection was probably the only one in the country, when it was obtained. There are also casts of palæontological specimens, some of which are very difficult to procure at the present time.

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#### DEPARTMENT OF MINERALOGY.



SOME interesting additions to the Mineral Cabinet are worthy of notice, among which is a group of Olivine (Peridot) crystals from Egypt. The crystals show prisms, domes and pyramids with noticeable compression. This new source of Peridot has considerable interest. The Peridot gems of collections have largely come from the East, but their exact origin was unknown. Mr. Kunz has suggested that they must date back to the time of the Crusades, having been brought from the East, and from time to time found their way into commerce from churches and cloisters. The new locality is somewhere in Upper Egypt near the Red Sea, and was probably the source, or near the source, of the gems of the Levant. Some fine cut Peridots are to be seen in the Morgan Collection of Gems.

A specimen of the new and uncommon Chalmersite is among these additions. This mineral occurs in fluted orthorhombic crystals on dolomite, associated with pyrrhotite, chalcopyrite and siderite in the gold mine at Morro Velho in Minas Geraes, Brazil. The crystals are usually twinned, lustre metallic and color a bronze yellow.

Anapite from Anapa, Black Sea, in pale green plates is not altogether new to the collection, as a poorer but broader surface was previously secured, but the development of the plates is much more crowded and characteristic in the new specimen. The mineral is a hydrated phosphate of lime and iron.

An elbow twin of Cassiterite like the familiar forms of Rutile from Parksburch, Pa., is an interesting addition. This is from the classic locality of Morbihan, France, and though small is exceptionally perfect.

Two crystal fragments of Lapis Lazuli showing rhombic dodecahedral planes are valuable additions, since crystals of this mineral are phenomenally scarce. Teallite from Bolivia is another noteworthy addition to the cabinet. It is a new species, being the sulphostannate of lead. The exact locality is unknown though in all probability it comes from Poopó, where Franckeite and Cylindrite are found. It occurs in thin elastic flexible and cleavable laminae. An elegant wire silver from Kongsberg, Norway, and a superb group of Stephanite crystals from Příbram, Hungary, Natrolite of relatively great size (for crystals), two unusual Beryls and an Indicolite Tourmaline, complete a small but valuable purchase, made with the assistance of the Bruce Fund.

L. P. G.

#### GROUP OF THE CRESTED CASSIQUE.



THE Crested Cassique, *Ostinops decumanus* (Pall.), which is also known by the names of Oropendula, Japu and Yellow-tail, is a tropical American relative of our Orioles, its nest, as the examples in the group show, being similar in plan to the smaller, bag-like structure of our Baltimore Oriole. The Cassique, however, not only builds a larger nest, but one hundred or more nests have been found suspended from the branches of a single tree. In spite of the comparatively small openings of the nests, the birds enter them in nearly full flight and when the presence of hungry young birds demands frequent visits by the parents, a colony



CRESTED-CASSIQUE GROUP  
Hall No. 208

of Cassiques presents one of the most animated and attractive sights in the bird-life of our tropical forests. Following the rule that fewer eggs are laid by tropical than by northern birds, the Cassique lays but two eggs, while our Oriole lays four or five.

The Cassique possesses a great variety of loud calls and whistles, some of which are very musical. In the nesting season the male, which is noticeably larger than the female, has the singular habit of bending low his head while uttering a long-drawn creaking call, which he follows by flapping his wings violently together over his back. A bird in the upper part of the group is represented in this act.

The present species of Cassique is found throughout South America from southern Brazil northward to Panama, an allied species extending northward to Mexico.

Poised before the orchid (*Miltonia candida*) which appears in this group is a Hummingbird (*Florisuga mellivora*), while on the ground an Ant-Thrush (*Formicarius analis saturatus*) may be seen. The positions of the Cassiques, the Hummingbird and the Ant-Thrush in relation to their surroundings, illustrate the facts that brightly marked birds are, as a rule, found in the trees among leaves and blossoms, while the dull-colored species usually live on or near the ground.

The nests here shown were collected in Trinidad by Mr. A. B. Carr. The group was prepared at the Museum under the direction of Mr. J. D. Figgins and has been placed in the general collection of birds, Hall No. 208 of the second-floor, North Wing.

#### MUSEUM NEWS NOTES.



THE Library has received as a gift a copy of the catalogue of the Heber R. Bishop collection of jade. This unrivaled collection was presented by Mr. Heber R. Bishop during his life time to the Metropolitan Museum of Art where it has been installed in a room prepared for it at the expense of the donor. This catalogue is the most thorough investigation of the subject of jade and jade implements which has been undertaken, and it is considered to be the most magnificent example of the art of book-making which has been attempted in modern times. The

work consists of two folio volumes and is limited to an edition of 100 copies, none of which goes to a private individual, and none of which will be sold. These volumes measure 19 x 25 inches, are printed on the finest quality of linen paper, made expressly for the work and weigh respectively 69 and 55 pounds. They contain together 570 pages, 150 full-page illustrations and nearly 300 pen-and-ink sketches. This gift was made the subject of a special vote of thanks by the Trustees.

THE HON. SETH LOW, LL.D., has been elected to Patronship in the Museum.

THE Trustees have made the following changes in and additions to the membership of the Museum:

Mrs. Guy Ellis Baker was elected to succeed to the Patronship of her father, the late Gen. L. P. di Cesnolà.

Mrs. F. A. Constable, to succeed to the Patronship held by her husband, the late Mr. F. A. Constable.

Mr. Adrian Iselin, Jr., to succeed to the Patronship of the late Mr. Adrian Iselin, who for many years was one of the Board of Trustees.

Mr. Adolph Lewisohn was elected a Patron, in recognition of his gift of Alaskan ethnological specimens.

Mr. George G. Heye was elected a Life Member, in recognition of his gift of Socorro pottery.

Mrs. Albert Bierstadt was elected a Life Member, in recognition of her gift of Indian ethnological specimens.

THE following persons have subscribed to Life Membership in the Museum during the year 1905.

S. T. Armstrong, M.D.  
Geo. McKesson Brown  
Katharine L. Cammann  
J. E. Childs  
Henry A. C. de Rubio  
W. B. Dickerman  
J. W. Dimick  
Edward K. Dunham  
Thomas T. Eckert, Jr.  
Amos F. Eno  
Allen W. Evarts  
Charles J. Harrah  
George A. Kessler  
Guy R. McLane  
James A. Macdonald

Charles Duncan Miller  
Charles E. Milmine  
Abram G. Nesbitt  
Acosta Nichols  
Trenor L. Park  
O. H. Payne  
Seymour Perkins  
Henry Phipps  
George R. Sheldon  
Jens Skougaard  
Wm. S. Thomas, M.D.  
Richard L. Walsh  
Henry de Forest Weekes  
James Dugald White  
James Gilbert White

Wm. Ziegler<sup>1</sup>

<sup>1</sup> Deceased

THE list of Annual Members of the Museum was increased by the addition of 210 new names during the year 1905.

THE changes in installation in the large wall cases in the Morgan Gem Room have been completed. The cases have been lined with velours, and the handsomest specimens of Jade, Malachite, Azurite, Quartz, Calcite, Sulphur, Feldspar, Gypsum, Fluorite, Tourmaline and Rhodonite have been mounted in them. Each specimen has received independent treatment to bring out its salient characters in the best manner possible. Most visitors will be surprised at the wealth of beautiful material displayed, particularly in Malachite and Azurite, the green and blue copper ores for which the Copper Queen Mine of Arizona has long been famous, Calcite, or Calc-spar, and Quartz, including some remarkable masses of Amethyst.

MR. RICHARD TJADER, a traveler and hunter of wide experience, accompanied by Mr. Herbert Lang, one of the Museum preparators, left New York on March 1 on an expedition into British East Africa (Uganda) for birds and mammals, particularly the large mammals of the region, for the Museum collections. The party will land at Mombassa on the east coast and proceed thence by railroad to Nairobi. From Nairobi advance will be made by circuitous route northward, westward and southward to Port Victoria on Lake Victoria, whence return to the coast will be made by boat and rail. The expedition has been provided for through the generosity of Mr. Samuel Thorne.

MR. BRUCE HORSFALL, the bird artist, spent two weeks in Florida in January making sketches and notes for the Museum groups representing the Brown Pelican, the Water Turkey, the Great Blue Heron and the Sandhill Crane. The trip was highly satisfactory, and the results will shortly appear in the exhibition halls. This is a part of the work being carried on under the North American Ornithology fund to which the Museum owes the San Joaquin Valley group, the Flamingo group and several smaller groups.



THROUGH the generosity of a friend of the Museum, Professor H. E. Crampton of Barnard College, Columbia University, has been sent on an expedition to the South Sea Islands, particularly to study certain features of the fauna of the Tahiti group. The specimens collected by Professor Crampton are to become the property of the Museum.

MR. J. H. BATTY is in Mexico collecting birds and mammals for the Department of Mammalogy and Ornithology. He will make his way southward through Central America to South America before returning to the Museum.

MRS. ALBERT BIERSTADT has presented to the Department of Mammalogy an unusually large and fine mounted head of an American bison, which was taken by her husband many years ago while hunting on the Great Plains. The acquisition is particularly welcome on account of the practical extinction of the animal from its former extensive range. Mrs. Bierstadt has also given to the Department of Ethnology a valuable series of specimens consisting of baskets collected about fifty years ago, elaborately carved, wooden spoons from Alaska and large cedar chests with engraved and painted designs representing the Raven and the Killer Whale, together with specimens, such as beaded bags, drums, rattles and pipes, collected in early years from the Indians of the Plains.

THE Demuth collection of pipes and smoking utensils has been considerably extended in the past few months by the addition of a large series of specimens of ceremonial and other pipes from various tribes of North American Indians, and from the Ashanti, the Kaffir, the Makalolo, the Bali and other tribes of central and southern Africa. A series of Filipino pipes and cigars is an important further addition to this collection.

A LARGE group representing the Collared Peccary of Mexico has been installed in the Hall of North American Mammals, No. 206 of the second floor, and consists of a series of five of these pig-like creatures in their natural surroundings in southern Sinaloa, Mexico. The specimens and accessories were collected

near Escuinapa by Mr. J. H. Batty. The scene shows too the wonderful assemblage of thorny plants of several kinds characteristic of the hot semi-arid regions of our continent. The group was prepared at the Museum by Herbert Lang and Dr. B. E. Dahlgren.

A NEW group in the Siberian Hall, No. 101 of the ground floor of the building, represents some of the ceremonials of the Reindeer Chukchee, a large tribe inhabiting the extreme north-eastern part of Siberia, preparatory to starting out upon the annual reindeer hunt which provides these people with food and raiment.

A SELECTION of some of the most striking material from the rich Museum collection from the South Sea Islands has been installed in the West Tower room opening off from the Siberian Hall. This is merely a suggestion of the extensive series which will be placed on exhibition when space has been provided.

ON February 24, Professor W. M. Wheeler, Curator of Invertebrate Zoölogy, went to Porto Rico to study some phases of the insect fauna of that island and make collections for the Museum in connection with a botanical expedition under Professor N. L. Britton, Director of the Botanical Garden in Bronx Park

THE series of models in the Department of Invertebrate Zoölogy continues to grow. Among the new models may be mentioned those representing several kinds of rotifers, bryozoans and other forms. A series of eleven models shows the development of the starfish from the most rudimentary embryo to the end of the tenth day, when the larval form is about to pass from the creeping into the free swimming stage. The class of Brachio-poda is now represented by a series of selected forms mounted in alcohol or formaldehyde.

THE Department of Geology has received a ten-foot section of a drill core from a depth of 170-180 feet below the new building at 176 Broadway. The specimen, which is of garnetiferous mica schist, is the gift of the Standard Plunger Elevator Co.



AN interesting and valuable collection of Termites and nests from the Isthmus of Panama has been donated to the Museum by Mrs. A. Beaumont of Vineland, New Jersey, as a memorial of her husband, the late Joseph Beaumont, Esquire, who collected the specimens. The collection contains several thousand queens, males, workers and soldiers of several species of Termites, preserved in alcohol and mounted in balsam on slides, together with specimens of nests, Termite tunnels and a number of other insects inhabiting Termite nests.



THE IGUANA GROUP  
Hall No. 207

AMONG groups which have been placed temporarily in the East Mammal Hall, No. 207 of the second floor, may be mentioned those of the Iguana, the large tropical lizard which was collected for the Museum in Sinaloa, Mexico, the great Texas Rattlesnake, which next to the Diamond Back is the largest and most dangerous of the poisonous snakes in the United States, collected near the mouth of the Rio Grande and the Mud-Turtle,

representing a familiar inhabitant of the fresh-water marshes and ponds of the United States. Several snakes have been mounted and placed for the time being in the cases near by.

THERE has been added to the William Schaus collection a series consisting of 1500 specimens of Lepidoptera from Cuba collected by Mr. Schaus himself.

A PLASTER cast of the large Leatherback Turtle which was presented to the Museum last summer by Messrs. G. M. Long & Co. of New London, Conn., has been installed temporarily in the East Mammal Hall, No. 207 of the second floor of the Museum. The Leatherback is the largest of the Marine reptiles found in the vicinity of New York City.

THE Department of Anthropology has recently received from the Blackfoot Indians a medicine bundle used in the annual sun-dance. These bundles are rather difficult to obtain because of their sacred character and the restrictions governing their transfer from one individual to another. For these reasons they make an unusually important addition to a museum collection. The sun-dance is usually given at the expense of some woman who, in time of great trial, makes a vow to the sun that if her prayer is granted she will secure one of the sacred bundles and give or bear the expense of the sun-dance during the following summer. The bundle contains a head-dress upon which are symbols of the lizard, the First Woman and the sacred turnip, together with the feathers of a number of birds. In addition, the bundle contains a sacred digging stick with which the First Woman dug up the sacred turnip in violation of the commands of the Sun, the result of which was her fall. In the bundle there are also seven different kinds of paint used to anoint the body; seven large rattles representing the seven stars, and numerous other smaller objects used in the ceremony. There is an elaborate ritual pertaining to the bundle containing about one hundred songs referring to the power of the Sun and of the First Woman who dug up the forbidden turnip. This bundle and its contents will be installed in the exhibit of the Plains Indians.

THERE has been placed in the west stairway between the

second and third floors, a peculiar exhibit consisting of four "pictures" to demonstrate the fact that the colors of birds agree in tint with the colors of their surroundings. Three of the pictures represent the Bluejay, the Woodpecker and the Bird of Paradise in their natural surroundings and are intended to prove the theory that animals' colors, if they remain unchanged throughout the year, represent the scene which forms their background at the season and for the eyes with which their lives are most concerned. They are striking illustrations of protective coloration. The fourth picture is a landscape made entirely of the feathers of the Bluejay. The exhibit has been gotten together by Mr. A. H. Thayer of Monadnock, N. H.

AN attractive exhibit which has recently been placed on view in the Chinese Hall, No. 301 of the gallery floor, is the mahogany bed of a Chinese nobleman. The woodwork is elaborately inlaid with carved ivory representing landscapes and conventional figures and is ornamented with delicate carvings and paintings on silk. This combined bed and anteroom is designed to stand like one of our ordinary bedsteads in the sleeping room of the owner.

A NEW group in the North American Hall, No. 102 on the ground floor, represents the summer home of the Eskimo of Cumberland Sound. The scene selected is the bringing home of the results of a successful seal-hunting expedition. This group is a companion piece to the group of the winter home of the same tribe.

THE naturally mummified body from the copper mine in Chile, popularly known as the "Copper Lady," has attracted thousands of visitors to the Peruvian Hall during the past four months. The specimen was described and illustrated in the January number of the JOURNAL.

THERE were more than three hundred lectures and scientific papers given at the Museum during the year 1905. The attendance at these was as follows: Members' courses, 10,485; Pupils' courses, 46,399; on the principal holidays, 3,762; Board of Education courses, 42,212; meetings of scientific societies, 2,688.

THE records show that 17,402 visitors attended the American Tuberculosis Exhibition which was held at the Museum from November 27 to December 9, 1905.

THE attendance at the Museum in the year 1905 was 565,489 visitors, a highly satisfactory increase over the attendance in 1904. The receipts from membership fees too were larger during the past year than ever before, amounting to \$17,875.00.

ON account of the enforced absence of Professor Bickmore through illness, the afternoon lecture to the general public on Washington's Birthday was given by Mr. George H. Sherwood, of the Scientific Staff, and the Members' lectures on March 15 and 22 were delivered by Professor Robert W. Prentiss, of Rutgers College.

THE Collection of Birds of Paradise provided for through the generosity of a friend of the Museum has recently received several choice acquisitions through purchase.

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### LECTURES.

#### MEMBERS' COURSE.

THE second course of lectures for the season 1905 and 1906 to Members of the American Museum of Natural History was given during February and March. Programme:

February 15.—MR. HARLAN I. SMITH, "The Five American Nations: Conquerors of the Snow, Forest, Mist, Desert and Plain."

March 1.—MR. FRANK M. CHAPMAN, "Impressions of English Bird-Life."

March 8.—MR. BARNUM BROWN, "Travels in Patagonia."

March 15.—PROF. R. W. PRENTISS, "Meteors and Comets: Their Mutual Relations."

March 22.—PROF. R. W. PRENTISS, "The Planets: Their Telescopic Appearance and Physical Condition."

## PUPILS' COURSE.

THE programme of the second course of lectures to the public school children for the season 1905 and 1906 is as follows:

Mar. Apr.

- Monday, 12, 2.—MR. G. H. SHERWOOD, "Japan and her Neighbors."  
 Wednesday, 14, 4.—MR. F. M. CHAPMAN, "Travels in the West Indies."  
 Friday, 16, 20.—MR. R. W. MINER, "Animals of North America—Their Habits and Uses."  
 Monday, 19, 23.—MR. G. H. PEPPER, "Life in California and the Great Southwest."  
 Wednesday, 21, 25.—DR. E. O. HOVEY, "The Region of the Great Lakes."  
 Friday, 23, 27.—MR. G. H. SHERWOOD, "American Trees and their Products."  
 Monday, 26, 30.—MR. H. I. SMITH, "Hiawatha's People."

May

- Wednesday, 28, 2.—MR. G. H. SHERWOOD, "Historical Scenes in the Colonies."  
 Friday, 30, 4.—MR. R. W. MINER, "Mediterranean Countries, Ancient and Modern."

Particulars regarding this course may be obtained by addressing the Director.

## PEOPLE'S COURSE.

THE programme of the second course of Free Lectures to the People, which are given on Tuesday and Saturday evenings in co-operation with the Department of Education of the City of New York, is as follows:

Saturday evenings at 8 o'clock.

A course of nine lectures on Physics, illustrated by stereopticon views and experiments.

PROF. ERNEST R. VAN NARDROFF.

- March 3.—"The Nature of Light and Color."  
 March 10.—"Spectrum Analysis and the Stars."  
 March 17.—"Color Photography."  
 March 24.—"The Optics of Painting."  
 March 31.—"The Colors of Polarized Light."  
 April 7.—"Colors from the Interference of Light."  
 April 14.—"The Relation of Light to Electricity."

April 21.—"Optical Illusions."

April 28.—DR. CHARLES H. TYNDALL, "Wireless Telegraphy."

Tuesday evenings at 8 o'clock.

March 6.—MR. OSCAR PHELPS AUSTIN, "A Tour of the World's Markets and Market Places."

March 13.—MR. B. BULKLEY, "The Yellowstone National Park."

March 20.—PROF. HERSCHEL C. PARKER, "First Ascents and Explorations in the Canadian Alps."

March 27.—MR. A. H. FISH, "The Land of Lewis and Clark."

April 3.—DR. C. F. WALKER, "The Lake Superior Copper Country."

April 10.—MR. JAMES ARTHUR MACKNIGHT, "The South To-day."

April 17.—MR. WILLIAM T. DORWARD, "The City of Washington."

April 24.—MESSRS. ALBERT ULMANN, R. P. BOLTON, and EDWARD HAGAMAN HALL, "Historic Landmarks of New York City."

#### LINNÆAN SOCIETY COURSE.

IN co-operation with the New York Linnæan Society a course of lectures was delivered on Wednesday evenings according to the following programme:

February 21.—DR. ALFRED G. MAYER, "Tortugas Marine Laboratory of the Carnegie Institution—its Aims and Problems."

March 7.—MR. EDGAR F. STEAD, "New Zealand Bird-Life."

March 14.—DR. ROBERT T. MORRIS, "A Naturalist's Camping Trip to Hudson Bay."

March 21.—MR. G. ABBOTT, "Bird-Hunting with a Camera."

#### MEETINGS OF SOCIETIES.

THE New York Academy of Sciences holds its regular meetings at 8:15 P.M. at the Museum in the following order:

First Mondays.—Business meeting and Section of Biology.

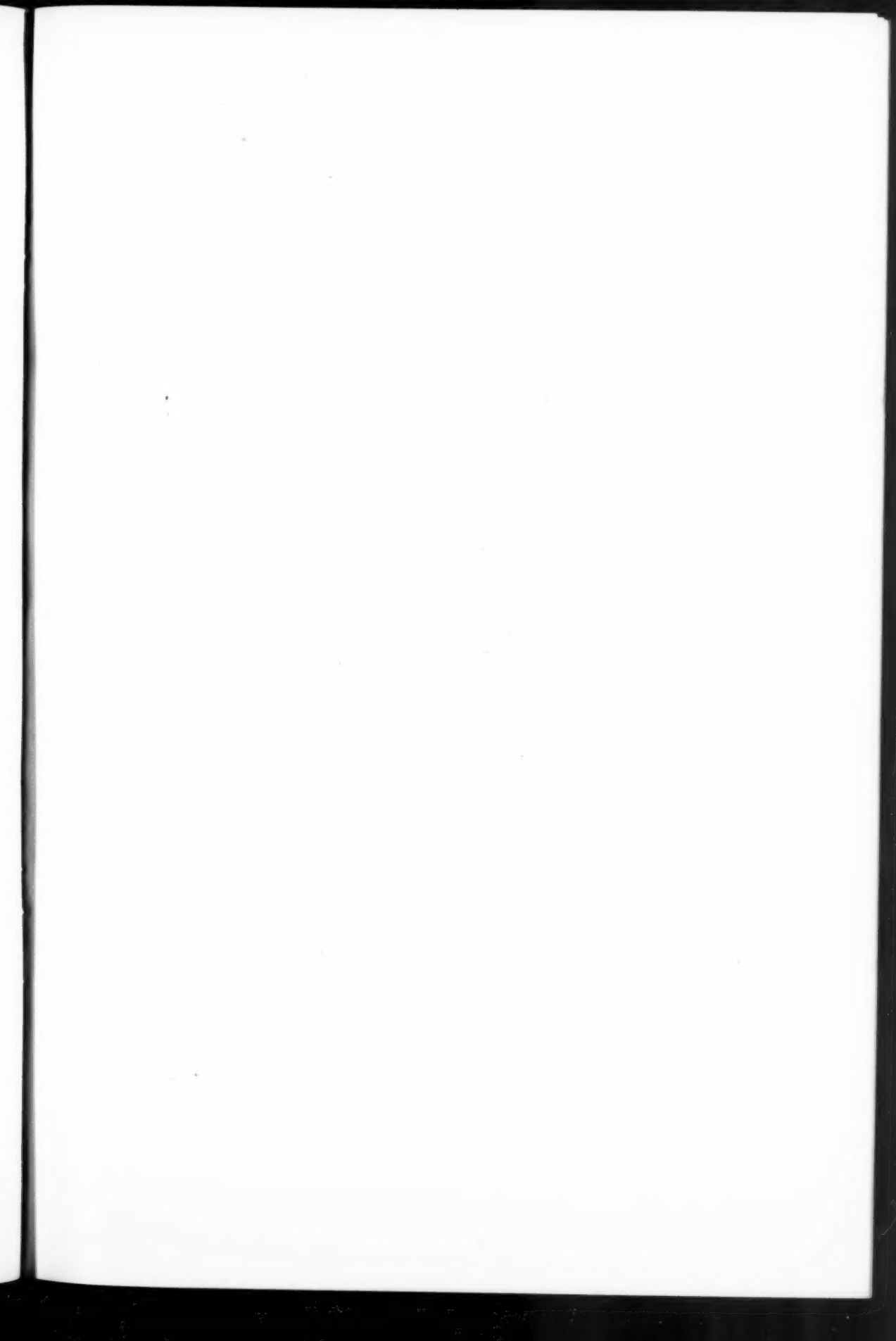
Second Mondays.—Section of Geology and Mineralogy.

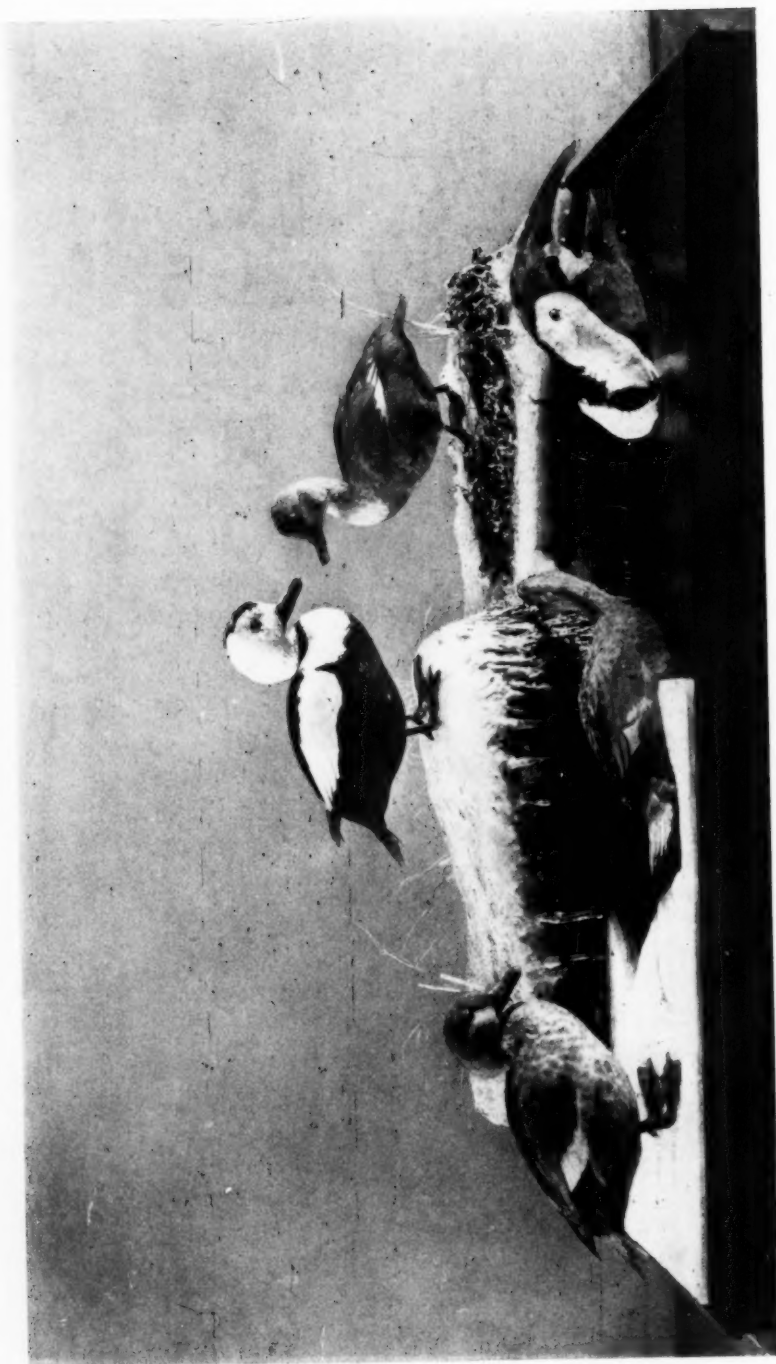
Third Mondays.—Section of Astronomy, Physics and Chemistry.

Fourth Mondays.—Section of Anthropology and Psychology.

THE Linnæan Society, the New York Entomological Society and the Torrey Botanical Club hold meetings upon Tuesday evenings, and the New York Mineralogical Club upon Wednesday evenings as announced.

THE meetings of all the societies are open free to the public and visitors are made welcome.





THE LABRADOR DUCK  
Group, Hall No. 208



## THE BIRDS OF THE VICINITY OF NEW YORK CITY.<sup>1</sup>

BY FRANK M. CHAPMAN.

Associate Curator of Mammalogy and Ornithology.

### INTRODUCTION.

The collection which this Guide is intended to accompany has been formed especially to aid students in identifying the birds found in the vicinity of New York City. It occupies a portion of the West Corridor of the third floor (Hall No. 303). With a few exceptions, all the specimens contained in it were collected within 50 miles of the American Museum of Natural History. The species which we have as yet been unable to secure within these limits are represented temporarily by specimens from the North American Collection. The collection is placed under two heads: first, systematic, containing virtually all the birds which have been recorded from within the prescribed limits, and second, seasonal, in which only the birds of the month are exhibited, as is explained more fully beyond. Species of accidental occurrence, or those which have been found in this vicinity but once or twice, are grouped at the end of the systematic collection.

The birds are labeled in accordance with the system of nomenclature adopted by the American Ornithologists' Union. The number on the label, preceding the name of each species is its number in the Union's "Check-List" of North American birds (2nd edition, 1895). In the desk case in the center of the hall will be found a local collection of the nests and eggs of the birds which breed within 50 miles of the Museum. It is labeled on the same plan as the local collection of birds. Near by are placed photographs from nature of the nests of most of our breeding birds and exhibits of bills, feet, wings, tails and feathers designed to explain technical terms used in descriptive ornithology. A list of useful ornithological publications will also be found here.

<sup>1</sup> Issued also in separate form as **Guide Leaflet** no 22.

The appended annotated list of the species known to occur within a radius of 50 miles of the Museum is based on information derived for the most part from four sources: (1) previously published records; (2) the author's notes covering a period of twenty years' intermittent observation, mainly at Englewood, N. J.; (3) the observations of Mr. Waldron DeWitt Miller at Plainfield, N. J.; and (4) information received from Mr. William Dutcher. For many years Mr. Dutcher has made a specialty of the study of Long Island birds and has brought together a vast amount of data concerning them.

As a matter of local interest an asterisk (\*) has been placed before those species which have been observed in Central Park. This list of Park birds is based on published records, the author's observations and information received from Messrs. C. G. Abbott, S. H. Chubb and B. S. Bowdish.

The text cuts with which this Guide is illustrated, with the exception of the Starling, are from Coues's "Key to North American Birds." For their use the Museum is indebted to Messrs. Dana Estes and Company, the publishers of that work. The full page plates are from photographs of Museum exhibits.

The region embraced within our limits possesses natural advantages calculated to attract a great number of birds. Our sea-coast, with its sandy beaches and shallow bays; our rivers, creeks and ponds, with their surrounding grassy marshes; our wooded hillsides and valleys; our rolling uplands and fertile meadows, offer haunts suited to the wants of most birds. Again, our coast-line and the Hudson River valley form natural highways of migration regularly followed by birds in their journeys to and from their summer homes.

The exceptional abundance of birds in this vicinity, however, is not due alone to the varied character of the country, or to the fact that twice each year streams of migrants pass along our coasts and through our valleys. There are certain causes which tend to limit the ranges of animals, chief among which is temperature. A study of the ranges or habitats of animals and plants shows that the boundaries of the areas inhabited by many species coincide with one another and also to a greater or less extent with lines of equal temperature. The ranges of these species being thus governed by natural causes, they are taken as indices of the limits of faunas or natural life-areas. The

lines between these faunas cannot, of course, be sharply drawn. The change from one to another is gradual, and between the two a neutral strip exists in which will be found species characteristic of each. Just such a condition is found in this vicinity, the northern boundary of the Carolinian Fauna overlapping the southern boundary of the Alleghanian Fauna in the valleys of the Delaware, Hudson and Connecticut. In other words, we have here on the one hand a number of birds which are found no farther north and on the other certain species which are found no farther south; that is, in the breeding season, for among birds only the nesting ranges are of value in determining the boundaries of faunas.

The southern limit of the Carolinian Fauna on the Atlantic Coast is near Norfolk, Virginia; its northern limit, on the coast, as said above, is in the vicinity of New York City. To be more exact, a careful study of the nesting ranges of certain species shows that the most northern points at which they are regularly found is Port Jervis in the Delaware valley, Fishkill in the Hudson River valley, and Portland in the Connecticut River valley. These localities then may be considered as defining the northern limits of the Carolinian Fauna in the valleys in which they are placed. In the more elevated country between these points it is doubtful if the limits of the fauna reach quite as far north, for river valleys, both because they offer a natural pathway for the extension of a bird's range, and because of the higher temperature prevailing in them, tend to carry northward the boundaries of faunas. Eastward, along the Connecticut shore, the Carolinian Fauna may reach the mouth of the Thames. Long Island, although farther south, belongs for the most part in the Alleghanian rather than the Carolinian Fauna. Numbers of species common and even abundant in the Lower Hudson valley are exceedingly rare on Long Island, especially on the southern shore. But along the northern shore, or older part of the island, where deciduous trees abound, there is an evident trace of the Carolinian Fauna shown by the regular occurrence of the Blue-winged Warbler and the Acadian Flycatcher.

The following Carolinian birds are found every summer within 50 miles of the Museum, and all but two or three are known to nest regularly here. Their occurrence as breeding birds northward beyond these limits is, with but few exceptions, rare and irregular.

Clapper Rail.	Blue-winged Warbler.
King Rail.	Louisiana Water-Thrush.
Turkey Vulture.	Kentucky Warbler.
Barn Owl.	Hooded Warbler.
Acadian Flycatcher.	Mockingbird.
Fish Crow.	Carolina Wren.
Cardinal.	Tufted Titmouse.
Rough-winged Swallow.	Carolina Chickadee.
Worm-eating Warbler.	Blue-gray Gnatcatcher.

The southern limit of the Alleghanian Fauna on the coast is less clearly defined. It includes, however, Long Island and northern New Jersey. Its boundaries may be determined by the presence in the breeding season of the following species, few of which are known to nest at sea-level south of our limits:

Carolina Rail.	Purple Finch.
Alder Flycatcher.	Golden-winged Warbler.
Least Flycatcher.	Nashville Warbler.
Bobolink.	Chestnut-sided Warbler.
Savanna Sparrow.	Black-throated Green Warbler.
Rose-breasted Grosbeak.	Wilson's Thrush.

Thus it will be seen that while the region south of our district has the Carolinian species mentioned, and the region to the northward has the Alleghanian species just given, we, in this intermediate strip, have both Carolinian and Alleghanian species.

It is evident, therefore, that from an ornithological standpoint we are most favorably situated, and a comparison of the number of birds found within our limits with the numbers recorded from other districts shows that the causes mentioned have been effective in giving us an unusually rich avifauna. Due allowance must of course be made for the much greater area included in all but one of the regions used in comparison.

Recorded from within 50 Miles of New York City	353
" " District Columbia (Richmond, MS.)	281
" " Ontario, Canada, (McIlwraith)	316
" " Massachusetts (Howe and Allen)	362
" " Illinois (Ridgway)	352
" " Indiana (Butler)	305
" " Michigan (Cook)	332
" " Kansas (Goss)	343

During the course of a year the bird-life of our vicinity is subject to great changes. Some birds are always with us, some come for the summer, others pass us in the spring and fall in traveling to and from their more northern homes, and others still come

only in the winter. Our birds may thus be arranged, according to the season when they are present, in several rather well-defined groups, for which the following names seem most applicable.

**I. Permanent Residents.**—This class includes species which are with us throughout the year, but it does not follow that the same individuals pass the entire year here. Comparatively few, indeed, of the species in this group are permanent residents in the strict sense of the term. The Bob-white, Ruffed Grouse, and several of the Owls are doubtless literally permanent residents, that is, the same individuals pass their lives in one restricted locality, but it is not probable that the Bluebirds, for example, found here during the winter are the same birds which nested with us in the summer. Doubtless our winter Bluebirds pass the summer farther north, while our summer Bluebirds winter farther south but as a species, the Bluebird is a permanent resident.

*List of Permanent Residents.*

Bob-white.	Blue Jay.
Ruffed Grouse.	American Crow.
Marsh Hawk.	Fish Crow.
Sharp-shinned Hawk.	Starling.
Cooper's Hawk.	Meadowlark.
Red-tailed Hawk.	House Sparrow.
Red-shouldered Hawk.	Purple Finch.
Broad-winged Hawk.	American Goldfinch.
Bald Eagle.	European Goldfinch.
Duck Hawk.	Song Sparrow.
Sparrow Hawk.	Swamp Sparrow.
Long-eared Owl.	Cardinal.
Barred Owl.	Cedar Waxwing.
Screech Owl.	Carolina Wren.
Great Horned Owl.	White-breasted Nuthatch.
Hairy Woodpecker.	Tufted Titmouse.
Downy Woodpecker.	Chicadee.
Flicker.	Robin.
	Bluebird.

**II. Summer Residents.**—Summer residents, as the name implies, are birds found here during the summer. They may, however, arrive early in March and remain until December, as do the Blackbirds and the Woodcocks, or they may not come until May and may leave us in August. Summer residents, then, are birds which come to us at varying times in the spring and after nesting here return to more southern winter resorts in the fall.

*List of Summer Residents.*

Wood Duck.	Henslow's Sparrow.
American Bittern.	Sharp-tailed Sparrow.
Least Bittern.	Seaside Sparrow.
Green Heron.	Chipping Sparrow.
Black-crowned Night Heron.	Field Sparrow.
King Rail.	Towhee.
Clapper Rail.	Rose-breasted Grosbeak.
Virginia Rail.	Indigo Bunting.
Sora.	Scarlet Tanager.
Yellow Rail.	Purple Martin.
Black Rail.	Cliff Swallow.
Woodcock.	Barn Swallow.
Bartramian Sandpiper.	Tree Swallow.
Spotted Sandpiper.	Bank Swallow.
Kildeer.	Rough-winged Swallow.
Piping Plover.	Red-eyed Vireo.
Mourning Dove.	Warbling Vireo.
Osprey.	Yellow-throated Vireo.
Barn Owl.	White-eyed Vireo.
Yellow-billed Cuckoo.	Black and White Warbler.
Black-billed Cuckoo.	Worm-eating Warbler.
Belted Kingfisher.	Blue-winged Warbler.
Red-headed Woodpecker.	Golden-winged Warbler.
Whip-poor-will.	Parula Warbler.
Nighthawk.	Yellow Warbler.
Chimney Swift.	Chestnut-sided Warbler.
Ruby-throated Hummingbird.	Black-throated green Warbler.
Kingbird.	Pine Warbler.
Crested Flycatcher.	Prairie Warbler.
Phoebe.	Ovenbird.
Wood Pewee.	Louisiana Water-Thrush.
Acadian Flycatcher.	Kentucky Warbler.
Alder Flycatcher.	Maryland Yellow-throat.
Least Flycatcher.	Yellow-breasted Chat.
Bobolink.	Hooded Warbler.
Cowbird.	Redstart.
Red-winged Blackbird.	Catbird.
Orchard Oriole.	Brown Thrasher.
Baltimore Oriole.	House Wren.
Purple Grackle.	Short-billed Marsh Wren.
Vesper Sparrow.	Long-billed Marsh Wren.
Savanna Sparrow.	Wood Thrush.
Grasshopper Sparrow.	Wilson's Thrush.

**III. Summer Visitants.**—Comparatively few birds fall into this group. As a rule the northern limit of their breeding range is not far south of our southern boundaries and they sometimes

visit us in small numbers, generally after their breeding season is over. In this group may also be placed the Shearwaters and Petrels, some of which are known to nest in the Antarctic Regions during our winter. In the spring they migrate northward and pass the summer off our coasts.

*List of Summer Visitants.*

Gull-billed Tern.	American Egret.
Royal Tern.	Little Blue Heron.
Forster's Tern.	Wilson's Plover.
Sooty Tern.	Oyster-catcher.
Black Skimmer.	Turkey Vulture.
Greater Shearwater.	Red-bellied Woodpecker.
Audubon's Shearwater.	Summer Tanager.
Sooty Shearwater.	Carolina Chickadee.
Wilson's Petrel.	Blue-gray Gnatcatcher.

Mockingbird.

**IV. Winter Residents.**—Winter residents, like summer residents, may arrive long before and remain long after the season which gives them their name. Our Junco, or Snowbird, for example, comes from the north in September and remains until April, but is a typical winter resident. That is, it arrives in the fall and after passing the entire winter with us returns to its more northern summer home in the spring.

*List of Winter Residents.*

Holboell's Grebe.	Rough-legged Hawk.
Horned Grebe.	Saw-whet Owl.
Loon.	Horned Lark.
Red-throated Loon.	Prairie Horned Lark.
Razor-billed Auk.	American Crossbill.
Kittiwake Gull.	Redpoll.
Glaucous Gull.	Pine Siskin.
Great Black-backed Gull.	Snowflake.
Herring Gull.	Lapland Longspur.
Ring-billed Gull.	Ipswich Sparrow.
Green-winged Teal.	White-throated Sparrow.
American Golden-eye.	Tree Sparrow.
Buffle-head.	Junco.
Old-Squaw.	Northern Shrike.
King Eider.	Myrtle Warbler.
American Scoter.	Winter Wren.
White-winged Scoter.	Brown Creeper.
Surf Scoter.	Canadian Nuthatch.
Purple Sandpiper.	Golden-crowned Kinglet.

**V. Winter Visitants.**—Winter visitants are birds which may or may not visit us during the winter. As a rule, their presence



depends upon the severity of the winter. An unusually severe season sometimes forces boreal birds southward and they then may be found in numbers south of their regular winter range.

*List of Winter Visitants.*

Puffin.	American Eider.
Black Guillemot.	Goshawk.
Brunnich's Murre.	Black Gyrfalcon. (?)
Dovekie.	Hawk Owl.
Iceland Gull.	Snowy Owl.
Kumlien's Gull.	Evening Grosbeak.
Cormorant.	Pine Grosbeak.
Harlequin Duck.	White-winged Crossbill.
	Holbæll's Redpoll.

**VI. Regular Transient Visitants.**—The birds of this class are found here only during the migrations. Their summer homes are north of us, their winter homes are south of us, and we see them only when they pass northward on their spring migration and southward on their fall migration.

*List of Regular Transient Visitants.*

Pied-billed Grebe.	Tennessee Warbler.
Pomarine Jaeger.	Cape May Warbler.
Parasitic Jaeger.	Black-throated Blue Warbler.
Long-tailed Jaeger.	Dowitcher.
Laughing Gull.	Long-billed Dowitcher.
Bonaparte's Gull.	Stilt Sandpiper.
Common Tern.	Knot.
Roseate Tern.	Pectoral Sandpiper.
Caspian Tern.	White-rumped Sandpiper.
Cory's Shearwater.	Least Sandpiper.
Leach's Petrel.	Red-backed Sandpiper.
Gannet.	Semipalmated Sandpiper.
Double-crested Cormorant.	Western Sandpiper.
Red-breasted Merganser.	Sanderling.
Hooded Merganser.	Greater Yellow-legs.
Black Duck.	Yellow-legs.
Blue-winged Teal.	Solitary Sandpiper.
Pintail.	Willet.
Redhead.	Hudsonian Curlew.
American Scaup Duck.	Black-bellied Plover.
Lesser Scaup Duck.	Golden Plover.
Ruddy Duck.	Semipalmated Plover.
Canada Goose.	Turnstone.
Brant.	Pigeon Hawk.
Great Blue Heron.	Short-eared Owl.
Florida Gallinule.	Yellow-bellied Woodpecker.
Coot.	Magnolia Warbler.
Red Phalarope.	Bay-breasted Warbler.

Northern Phalarope.	Black-poll Warbler.
Wilson's Snipe.	Blackburnian Warbler.
Olive-sided Flycatcher.	Palm Warbler.
Yellow-bellied Flycatcher.	Yellow Palm Warbler.
Rusty Blackbird.	Water-Thrush.
Bronzed Grackle.	Connecticut Warbler.
Nelson's Sharp-tailed Sparrow.	Mourning Warbler.
Acadian Sharp-tailed Sparrow.	Wilson's Warbler.
White-crowned Sparrow.	Canadian Warbler.
Lincoln's Sparrow.	Titlark.
Fox Sparrow.	Ruby-crowned Kinglet.
Philadelphia Vireo.	Gray-cheeked Thrush.
Blue-headed Vireo.	Bicknell's Thrush.
Nashville Warbler.	Swainson's Thrush.

Hermit Thrush.

**VII. Irregular Transient Visitants.**—These birds occur irregularly during the migrations. With certain exceptions they are birds of the interior and breed in the northern United States and British Provinces. Their regular line of migration is down the Mississippi Valley, and their occurrence on the Atlantic coast is more or less infrequent. Here are also included species formerly common near New York, but now practically extinct within our limits, where, however, they are sometimes found.

*List of Irregular Transient Visitants.*

Least Tern.	Whistling Swan.
Black Tern.	Wilson's Phalarope.
Mallard.	American Avocet.
Gadwall.	Baird's Sandpiper.
American Widgeon.	Marbled Godwit.
Shoveller.	Hudsonian Godwit.
Canvasback.	Buff-breasted Sandpiper.
Ring-necked Duck.	Long-billed Curlew.
Greater Snow Goose.	Eskimo Curlew.
Blue Goose.	Passenger Pigeon.
American White-fronted Goose.	Golden Eagle.
Hutchins's Goose.	Migrant Shrike.
Black Brant.	Orange-crowned Warbler.

Grinnell's Water-Thrush.

**VIII. Accidental Visitants.**—The homes of the birds included in this class are so far removed from our boundaries that their presence here at any time can be considered only as purely accidental. In most cases it is doubtless due to the agency of storms or high winds which drive migrating birds from their course. One-fourth the number given below are Old World birds, and about one-half the total number have been found here but once.

*List of Accidental Vistants.*

Black-throated Loon.	Ground Dove.
Ivory Gull.	Black Vulture.
Little Gull.	Swallow-tailed Kite.
Sabine's Gull.	Swainson's Hawk.
Fulmar.	White Gyrfalcon.
Booby.	Great Gray Owl.
White Pelican.	Red-cockaded Woodpecker.
Brown Pelican.	Pileated Woodpecker.
European Widgeon.	Arkansas Kingbird.
European Green-winged Teal.	Raven.
Rufous-crested Duck.	Chestnut-collared Longspur.
Barnacle Goose.	Lark Sparrow.
White Ibis.	Blue Grosbeak.
Glossy Ibis.	Painted Bunting.
Snowy Heron.	Dickcissel.
Yellow-crowned Night Heron.	Louisiana Tanager.
Corn Crake.	Bohemian Waxwing.
Purple Gallinule.	Prothonotary Warbler.
Black-necked Stilt.	Cerulean Warbler.
European Woodcock.	Yellow-throated Warbler.
Curlew Sandpiper.	Townsend's Solitaire.
Ruff.	Varied Thrush.
Lapwing.	Wheatear.

*Summary.*

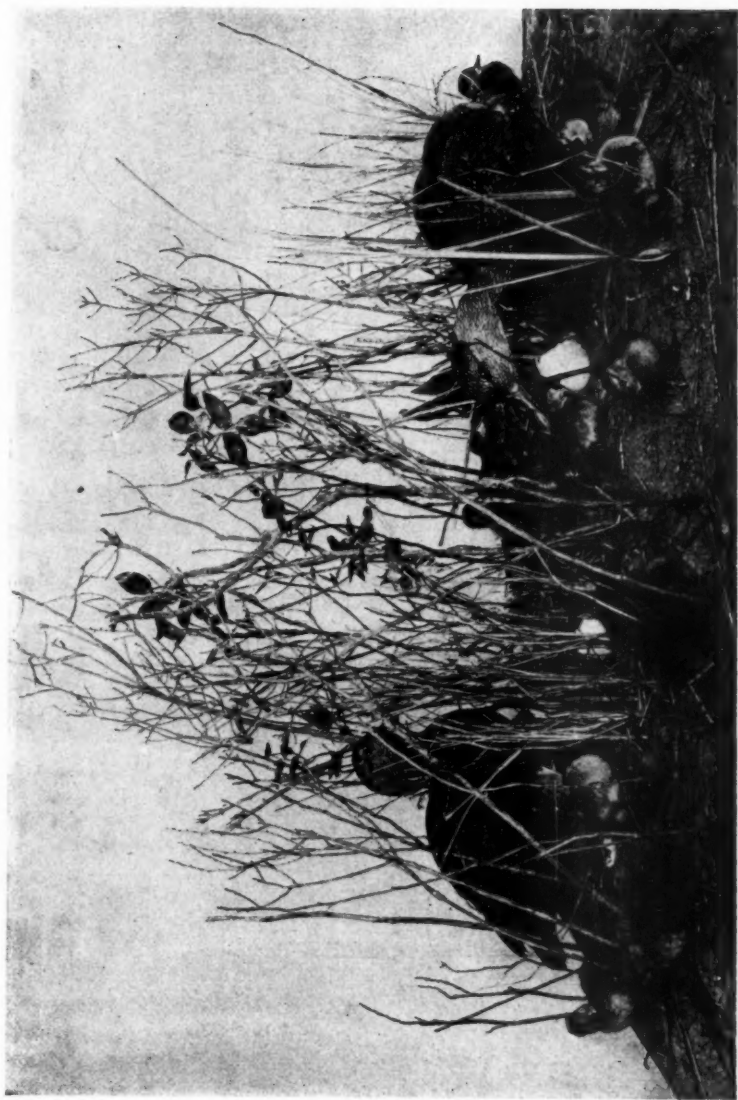
Permanent Residents	34
Summer Residents	86
Summer Visitants	19
Winter Residents	38
Winter Visitants	17
Regular Transient Visitants	86
Irregular Transient Visitants	27
Accidental Visitants	46

Total, 353

## THE SEASONAL COLLECTION.

The preceding seasonal analysis of our avifauna shows that only a part of the 353 birds which have been recorded from this vicinity are present at one time, and any arrangement of specimens which will, for example, show only the birds of a given month, will of course greatly simplify the problem of identification by excluding from it all species which, for seasonal reasons, we should not expect to find during the month in question.

The Seasonal Collection is made up of the Permanent Residents (Cases Q and O) and Migrants (Case P) and is changed



BLACK DUCK  
Group, Hall No. 208



each month. Thus, in February, it is composed of the ever-present Permanent Residents together with the migrants which have come from the north to spend the winter. In March, the March migrants from the south are added, and a month later those which may be expected to arrive in April are included. In due time the winter birds are withdrawn and the transient migrants removed, until in June, the collection consists of the Permanent Residents and birds which have come from the south to spend the summer. A similar treatment is continued throughout the year and the collection always, therefore, represents the bird-life of the month in which it is seen.

The following outline of the bird-life of the year explains more fully the manner in which this Seasonal Collection is arranged, and at the same time, it may be used as a reference check-list in the study of local migration. It should be understood that the dates given represent those of a climatically normal year and that only the commoner water birds are included.

**January Bird-Life.**—Probably during no other month is there less movement among our birds than in January. The regular winter visitants have come; the fall migrants which may have lingered until December have gone, and the earliest spring migrants will not arrive before the latter part of February or in early March. In fact, January is the only month in the year in which, as a rule, some birds do not arrive or depart. This rule, however, may be broken by such irregular birds as the Pine Grosbeak and the Redpoll, and, south of New York, the Snowflake and the Crossbill, birds which may be wholly absent some winters and abundant others.

The only birds usually to be found in January, therefore, are the permanent residents and the regular winter visitants. Singing, mating, nesting, molting, migrating, events which in their season play so important a part in a bird's life, do not concern the birds of January. With them food is the one important question, and their movements at this season are governed solely by the food supply. Snow may fall and winds blow, but as long as the birds find enough to eat they give small heed to the weather. Food, therefore, rather than temperature, is the most important factor in a bird's life at this season.

BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Winter Residents, see page 87.*

**February Bird-Life.**—The conditions prevailing in the bird

world during January will be practically unchanged until the latter part of February. Then, should there be a period of mild weather, we may expect to hear the Song Sparrows and Bluebirds inaugurate the season of song. An unusually warm day earlier in the month may have tempted either or both of these birds prematurely to welcome spring, but as a rule we do not hear them until late in February, and then only under favorable conditions.

The songs of these birds bid us keep watch for the earlier migrants, the Robin, the Purple Grackle and the Red-winged Blackbird, birds which pass the winter such a short distance south of us that they appear at the first sign of returning spring. Further confidence in the growth of the new year is shown by the Great Horned Owl, one of our less common species, which begins nesting late in February or early in March.

In spite of these movements among the birds, February is, generally speaking, a winter month, and it is only in exceptional years that we find much change in our bird-life.

BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Winter Residents, see page 87.*

*Migrants arriving from the South.*

February 15 to 28, in favorable seasons.

Purple Grackle.

Red-winged Blackbird.

Rusty Blackbird.

Robin.

**March Bird-Life.**—Although March is sure to witness a general northward movement among the birds, the date of their arrival is as uncertain as the weather of the month itself. Continued severe weather prevents an advance, which a higher temperature occasions. It is well, therefore, to watch the weather predictions, since birds will quickly follow in the wake of a warm wave.

When the ice leaves our bays, ponds and rivers, Ducks and Geese will appear. Even before this event, the Grackles, Red-winged Blackbirds and Robins will come in flocks and in song, and singing will become general with the Song Sparrows and Bluebirds, whose numbers will be greatly increased. When successive thaws have rendered the earth soft enough for the Woodcock's probe, we may expect to find him in favorable localities searching for his fare of earthworms. With the advent of insects, we may look for their enemy the Phoebe, and Meadowlarks, Cowbirds and other March Migrants may be found.

The weather which hastens the arrival of birds from the



South, also prompts certain of our Winter Visitants to begin their northward journey, and after March we do not often see Redpolls, Snowflakes or Northern Shrikes.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Winter Residents, see page 87.*

*Winter Residents leaving for the North.*

Horned Lark.	Snowflake.
Redpoll.	Pine Grosbeak.

Northern Shrike.

*Migrants arriving from the South.*

Appearing when the ice leaves the bays and rivers.

Loon.	Green-winged Teal.
Pintail.	Blue-winged Teal.
Mallard.	Canada Goose.

March 1 to 10.

Purple Grackle.	Rusty Blackbird.
Red-winged Blackbird.	Robin.

March 10 to 20.

Woodcock.	Meadowlark.
Phoebe.	Cowbird.

Fox Sparrow.

March 20 to 31.

Wilson's Snipe.	Mourning Dove.
Kingfisher.	Swamp Sparrow.

White-throated Sparrow.

**April Bird-Life.**—In early April the developments in the vegetable world, which the most casual observer cannot fail to see, are accompanied by corresponding but less noticed activities in the world of birds. The appearance of the skunk-cabbage, the blossoming of the pussy-willow and the early wild flowers soon become common knowledge; but the arrival of the Vesper, Field and Chipping Sparrows, of Tree Swallows, Myrtle Warblers and Hermit Thrushes, is known to comparatively few. Still, to the bird-lover, the return of these feathered friends is of even greater interest than the blossoming of trees and plants.

The migratory movement grows rapidly in strength, and during the latter part of the month one may expect to see newcomers almost daily. It will be noted that the earlier migrants of the month are all seed-eaters, while the later are certain insectivorous birds which catch their prey in the air, for example, Swallows, Swifts and Nighthawks.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Winter Residents, see page 87.*

*Winter Residents leaving for the North.*

Junco.	Brown Creeper.
Tree Sparrow.	Red-breasted Nuthatch.
Winter Wren.	Golden-crowned Kinglet.

*Migrants arriving from the South.*

## April 1 to 10.

Pied-billed Grebe.	Field Sparrow.
Great Blue Heron.	Chipping Sparrow.
Black-crowned Night Heron.	Tree Swallow.
Osprey.	Myrtle Warbler.
Vesper Sparrow.	American Pipit.
Savanna Sparrow.	Hermit Thrush.

## April 10 to 20.

American Bittern.	Barn Swallow.
Green Heron.	Yellow Palm Warbler.
Clapper Rail.	Pine Warbler.
Yellow-bellied Sapsucker.	Louisiana Water-Thrush.

## Ruby-crowned Kinglet.

## April 20 to 30.

Spotted Sandpiper.	Purple Martin.
Semipalmated Sandpiper.	Cliff Swallow.
Whip-poor-will.	Bank Swallow.
Chimney Swift.	Rough-winged Swallow.
Least Flycatcher.	Black and White Warbler.
Towhee.	Black-throated Green Warbler.
Blue-headed Vireo.	Brown Thrasher.

**May Bird-Life.**—As the season advances, marked changes in temperature are less likely to occur, and the migration becomes regular and continuous. In February and March there may be two weeks or more variation in the times of arrival of the same species in different years; in May we expect to find a given species within a day or two of a certain date. We shall, nevertheless, find the force of the migratory current still closely dependent on the weather, and under the encouragement of a high temperature we may be visited by "bird waves," flooding the woods with migrants. Birds are then doubtless more abundant than at any other season. As many as ten species may be noted as arriving on the same day, and sixty or seventy species may be observed within a few hours.

After May 15, birds begin to decrease in number, the Transient Visitants passing farther north, and by June 5 we have only Permanent Residents and Summer Residents.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Summer Residents, see page 86.*

*Migrants arriving from the South.*

May 1 to 10.

Common Tern.	White-eyed Vireo.
Solitary Sandpiper.	Nashville Warbler.
Semipalmated Plover.	Blue-winged Warbler.
Yellow-billed Cuckoo.	Parula Warbler.
Black-billed Cuckoo.	Black-throated Blue Warbler.
Nighthawk.	Magnolia Warbler.
Ruby-throated Hummingbird.	Yellow-breasted Chat.
Crested Flycatcher.	Chestnut-sided Warbler.
Kingbird.	Prairie Warbler.
Baltimore Oriole.	Small-billed Water-Thrush.
Orchard Oriole.	Hooded Warbler.
Bobolink.	Yellow Warbler.
Grasshopper Sparrow.	Maryland Yellowthroat.
Indigo Bunting.	Oven-bird.
Rose-breasted Grosbeak.	Redstart.
Scarlet Tanager.	House Wren.
Red-eyed Vireo.	Catbird.
Warbling Vireo.	Wood Thrush.
Yellow-throated Vireo.	Veery.

May 10 to 20.

Wood Pewee.	Black-poll Warbler.
Acadian Flycatcher.	Wilson's Warbler.
Yellow-bellied Flycatcher.	Canadian Warbler.
White-crowned Sparrow.	Long-billed Marsh Wren.
Golden-winged Warbler.	Short-billed Marsh Wren.
Tennessee Warbler.	Olive-backed Thrush.
Worm-eating Warbler.	Gray-cheeked Thrush.
Cape May Warbler.	Alder Flycatcher.
Blackburnian Warbler.	Mourning Warbler.
Bay-breasted Warbler.	Bicknell's Thrush.

**June Bird-Life.**—After June 5 we may be reasonably sure that, with a few exceptions, every bird seen has or has had a nest in this vicinity. Several of the birds which began nesting in April will rear second broods in June, while the young of other April-nesting birds may not leave the nest until June. All the birds that began nesting in May will still be occupied with household affairs in June, and when we add to these the late-breeding species that wait for June before settling their domestic arrangements, it will be seen that among birds June is the home month of the year.

Nest-building, egg-laying, incubating and the care of the young now make constant and exceptional demands on birds which, in response, exhibit traits which at other times of the year they give no evidence of possessing. Singing now reaches its highest

development, and certain call-notes are heard only at this season. The numberless actions incident to courtship, the intelligence displayed in nest-building, the choice of special food for the young, the devotion which prompts the parents recklessly to expose themselves in protecting their offspring,—all these manifestations of the bird-mind may be observed in June.

BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Summer Residents, see page 86.*

**July Bird-Life.**—The full development of the bird year is attained in June, and as early as the first week in July the season begins to wane, when, among some migratory birds, there are evidences of preparation for the journey southward.

The young of certain species which rear but one brood a year have now left the nest, and, accompanied by the parents, wander about the country. In localities which we had thoroughly explored in June, we may now find species not met with then. In some cases these families join others of their kind, forming small flocks, the nuclei of the great gathering seen later. Examples are Grackles, Red-winged Blackbirds and Tree Swallows. The last named increase rapidly in number, and by July 10 we may see them flying over late each afternoon *en route* to their roosts in the Hackensack marshes.

During the first week in the month we shall also find that certain birds have concluded their season of song. Bobolinks and Red-winged Blackbirds are rarely heard after the 10th of the month; their young are reared, the cares of nesting-time are passed, and with other one-brooded birds they begin to renew their worn breeding plumages by molting. After the 15th we miss the voices of the Veery, Orchard and Baltimore Orioles, Chat, Brown Thrasher and other birds.

BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Summer Residents, see page 86.*

**August Bird-Life.**—With the majority of our nesting birds, family cares are ended in August, and at this season they completely renew their worn plumages by molting. When molting, birds are less in evidence than at any other time. What becomes of many of our birds in August it is difficult to say. Baltimore Orioles, for example, are rarely seen from August 1 to 20, but after the latter date they reappear clad in full plumage, and they are then in nearly full

song. So apparently complete is the disappearance of birds in August, that before the fall migration brings new arrivals daily from the north, one may spend hours in the woods and hear only the Red-eyed Vireo and the Wood Pewee, August's own songsters.

Late in the month, migrants from the north travel through the woods in small companies, but the characteristic bird-life of August is in the marshes. There the Swallows come in increasing numbers to their roosts in the reeds, while Red-winged Blackbirds and Bobolinks, under the alias of Reedbird, are abundant where the wild rice grows.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Summer Residents, see page 86.*

*Migrants arriving from the North.*

August 1 to 15.

Sora.	Golden-winged Warbler.
Semipalmated Sandpiper.	Chestnut-sided Warbler.
Semipalmated Plover.	Canadian Warbler.
Yellow-bellied Flycatcher.	Small-billed Water-Thrush.

August 15 to 31.

Olive-sided Flycatcher.	Black-throated Green Warbler.
Tennessee Warbler.	Black-throated Blue Warbler.
Nashville Warbler.	Magnolia Warbler.
Parula Warbler.	Blackburnian Warbler.
Cape May Warbler.	Wilson's Warbler.

Red-breasted Nuthatch.

**September Bird-Life.**—The student whose patience has been sorely tried by the comparative scarcity of birds in August will find that in September his observations in the field will be attended by far more interesting results. The first marked fall in the temperature is sure to be followed by a flight of migrants which, like the "bird waves" of May, will flood the woods with birds. By far the larger number will be Warblers; indeed, September, like May, is characterized by the abundance of these small birds.

Birds of the year will outnumber the adults, and in most cases their plumage will be quite unlike that worn by their parents in May. In many instances, even the adults themselves appear in a changed dress. As a rule, fall plumages are less striking than those of spring, and when, in addition, it is remembered that birds are not in song, and that the foliage is much denser, the greater difficulty of identifying birds in the field will be appreciated.

About September 25 our more common Winter Visitants arrive from the north, but afterward birds decrease rapidly in number.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.**Summer Residents, see page 86.**Summer Residents leaving for the South.*

September 1 to 10.

Acadian Flycatcher.	Rough-winged Swallow.
Orchard Oriole.	Worm-eating Warbler.

Blue-winged Warbler.

September 10 to 20.

Baltimore Oriole.	Yellow Warbler.
Purple Martin.	Yellow-breasted Chat.

September 20 to 30.

Common Tern.	Rose-breasted Grosbeak.
Green Heron.	Yellow-throated Vireo.
Hummingbird.	Warbling Vireo.
Kingbird.	Hooded Warbler.
Crested Flycatcher.	Louisiana Water-Thrush.
Wood Pewee.	Veery.

*Migrants arriving from the North.*

September 1 to 10.

Lincoln's Sparrow.	Black-poll Warbler.
--------------------	---------------------

Connecticut Warbler.

September 10 to 20.

Wilson's Snipe.	Olive-backed Thrush.
Blue-headed Vireo.	Bicknell's Thrush.

September 20 to 30.

Herring Gull.	Myrtle Warbler.
Green-winged Teal.	Yellow Palm Warbler.
Blue-winged Teal.	Brown Creeper.
American Coot.	Golden-crowned Kinglet.
Junco.	Ruby-crowned Kinglet.
White-throated Sparrow.	Winter Wren.
White-crowned Sparrow.	Gray-cheeked Thrush.

**October Bird-Life.**—Early October generally brings the first killing frost, depriving insectivorous birds of a large part of their food and forcing them to journey southward. Flycatchers, Warblers, Vireos and Swallows now take their departure, and after the 15th of the month few insect-eating birds remain, except those which, like Woodpeckers, feed on insect's eggs or larvæ.

This is the season of Sparrows. In countless numbers they throng old stubble, potato and corn fields, doing untold good by destroying the seeds of noxious weeds. With these birds will be the lately arrived Juncos, Tree Sparrows and Fox Sparrows. When disturbed, all seek shelter in the nearest hedgerow, and their mingled notes produce a twittering chorus in which it is difficult to distinguish the voices of individual birds.

This, however, will not be the only bird music of the month. Certain species now have a brief second song period, and on the brighter days of the month we may hear Song, White-throated and Fox Sparrows, Phœbes and Ruby-crowned Kinglets singing.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Summer Residents, see page 86.*

*Summer Residents leaving for the South.*

October 1 to 10.

Black-crowned Night Heron.	Scarlet Tanager.
Yellow-billed Cuckoo.	Cliff Swallow.
Black-billed Cuckoo.	Barn Swallow.
Chimney Swift.	Bank Swallow.
Least Flycatcher.	White-eyed Vireo.
Bobolink.	Black and White Warbler.
Grasshopper Sparrow.	Oven-bird.
Indigo Bunting.	Redstart.

Wood Thrush.

October 10 to 20.

Spotted Sandpiper.	Catbird.
Whip-poor-will.	Brown Thrasher.
Nighthawk.	House Wren.
Red-eyed Vireo.	Short-billed Marsh Wren.
Maryland Yellowthroat.	Long-billed Marsh Wren.

October 20 to 31.

Pied-billed Grebe.	Towhee.
Phœbe.	Tree Swallow.

*Migrants arriving from the North.*

October 1 to 10.

Loon.	Bronzed Grackle.
Pintail.	Rusty Blackbird.
Mallard.	American Pipit.
Canada Goose.	Hermit Thrush.

October 10 to 20.

Fox Sparrow.

October 20 to 31.

Horned Lark.	Snowflake.
Pine Finch.	Redpoll.
Tree Sparrow.	Northern Shrike.

**November Bird-Life.**—It is an interesting fact that the last migrants to leave in the fall are the first to arrive in the spring. The bird-life of November, when the fall migration is practically concluded closely resembles, therefore, that of March, when spring migration is inaugurated. The reason for this similarity is to be found in the fact that both months furnish birds with essentially the same kind of food. Thus the Loon, Grebes, Ducks, Geese and



Kingfisher remain until the forming of ice in November or early December deprives them of food and forces them to seek open water; while Woodcock and Snipe linger until they can no longer probe the frost-hardened earth. The thaws of March, however, will bring all these birds back to us by restoring their food. Certain Sparrows stay with us until the weed-bearing seeds on which they feed are covered by snow, when they are compelled to retreat farther southward, only to return, however, when the March sun lays bare the earth. Few birds' songs are heard in November. In some sheltered spot Song and White-throated Sparrows may continue in voice, but the characteristic bird-note of the month is the scatter-call or fall whistle of Bob-White.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Migrants leaving for the South.*

Wood Duck.

American Bittern.

Great Blue Heron.

Woodcock.

Mourning Dove.

Belted Kingfisher.

Cowbird.

Red-winged Blackbird.

Purple Grackle.

Vesper Sparrow.

Chipping Sparrow.

Field Sparrow.

Swamp Sparrow.

**December Bird-Life.**—The character of the bird-life of December depends largely upon the mildness or severity of the season. Should the ponds and streams remain open, the ground be unfrozen and little or no snow fall, many of the migrant species of November will linger into December.

The comparative scarcity of food now forces birds to forage actively for provisions, and when a supply is found, they are apt to remain until it is exhausted. Their wanderings in search of food lead them over large areas, and our dooryards and orchards may often be visited by species which, when food is more abundant, do not leave their woodland haunts. An excellent means of attracting them is to provide suitable food. Crumbs and seeds scattered in some place where they will not be covered by snow or blown away will bring Juncos and Tree Sparrows; an old seed-filled sunflower head may prove a feast for Goldfinches, while bits of meat, suet or ham bone hung from a tree will be eagerly welcomed by Chickadees, Nuthatches and Downy Woodpeckers.

## BIRDS OF THE MONTH.

*Permanent Residents, see page 85.*

*Winter Residents, see page 88.*

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# The American Museum Journal

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## CONTENTS, VOL. VI, No. 2

	PAGE
THE TWENTY-FIFTH ANNIVERSARY OF THE PRESIDENCY OF MR. JESUP. By H. F. OSBORN. ( <i>Illustrated.</i> ) . . . . .	55
JOHN H. WINSER . . . . .	57
THE SCIENTIFIC PUBLICATIONS OF THE JESUP-NORTH PACIFIC EXPEDITION . . . . .	58
THE NEW METEORITE . . . . .	61
GUIDE TO THE COLLECTION OF LOCAL BIRDS . . . . .	61
HINDOO SILVER WARE. ( <i>Illustrated.</i> ) . . . . .	62
THE JOHN COLLINS WARREN COLLECTION . . . . .	64
DEPARTMENT OF MINERALOGY . . . . .	65
GROUP OF THE CRESTED CASSIQUE. ( <i>Illustrated.</i> ) . . . . .	66
MUSEUM NEWS NOTES . . . . .	68
LECTURES:	
MEMBERS' COURSE . . . . .	76
PUPILS' COURSE . . . . .	77
PEOPLE'S COURSE . . . . .	77
LINNÆAN SOCIETY COURSE . . . . .	78
MEETINGS OF SOCIETIES . . . . .	78
THE BIRDS OF THE VICINITY OF NEW YORK CITY. By F. M. CHAPMAN. ( <i>Illustrated.</i> ) Guide Leaflet No. 22. . . . .	81

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